LAKE TAHOE NON-MOTORIZED BOATING FRAMEWORK SUMMARY

I. LAKE TAHOE NON-MOTORIZED BOAT WORKING GROUP

The **Lake Tahoe Non-Motorized Boat Working Group** (Working Group) organized in 2007 to better understand and support kayaking, canoeing, rowing, paddle boarding, and other non-motorized boating. Participants include representatives of:

California Department of Boating and Waterways
California State Parks
California Tahoe Conservancy
Lake Tahoe Basin Management Unit, USFS
Lake Tahoe Water Trail Committee
Nevada Department of Wildlife
Nevada Division of State Parks
Tahoe Lakefront Owner's Association
Tahoe Regional Planning Agency
National Park Service, Rivers, Trails and Conservation Assistance Program (facilitator)

A. Guiding Principles

The Working Group developed a series of guiding principles. The principles provided a basis for discussion of non-motorized boating at Lake Tahoe.

1. Lake Tahoe is a unique natural environment with outstanding opportunities for ecologically sustainable nature based kayaking, canoeing and other non-motorized recreation alternatives.
2. The protection of the natural environment of Lake Tahoe-- its land, air, and water is central to the management and stewardship of this use.
3. The coordinated management of non-motorized boating will consider the interests of public and private property owners, environmental and resource managers, resort and business owners, and the recreational user to assure ecologically sustainable, responsible, and balanced use.
4. Non-motorized recreational use including day and overnight opportunities will be environmentally sensitive and respectful of nature and the human environment.
5. Lake Tahoe education, resource interpretation, and outreach will complement management objectives to promote community awareness, engagement and resource stewardship.

B. Issue Summary

The study process included outreach to user and special interest groups, and targeted data collection including a user survey. The considerations identified through this input process important to creating a management and facilities assessment and framework fit into four general categories.

Supporting non-motorized boating drives the need to:

- Support/enhance user experience. Input from paddlers throughout the process demonstrated the current high quality of the paddling experience at Lake Tahoe and identified specific needs for access and support facilities.
- Improve paddling safety. As use grows, boating safety concerns increase. These concerns relate to how paddlers protect themselves - with life vests, rescue training, and awareness of local wave and weather conditions - and how they interact safely with other lake users.
- Resolve use conflicts. The process identified some areas of deeply felt conflict between user groups. The most often discussed include public recreation access and its relation to trespass concerns on nearby private property, and potential conflicts between motorized and non-motorized boating.
- Resolve resource conflicts. Kayaking and paddle boarding are very mobile uses, allowing an intimate contact with natural resources such as wildlife habitats. While paddling can increase the stewardship response to natural resources, human access can also produce unacceptable impacts on those resources.

The Working Group considered this input, collected additional data, and refined the issues to be addressed as follows.

Facility/Access. Specific facility and access improvements can support a continued high quality recreation experience and reduce specific conflicts.

1. Parking. Need to improve/expand access to parking or information about parking to address:
   - seasonal public parking lot congestion/crowding,
   - unpermitted parking; and
   - proximity to beach launch sites

2. Wayfinding/Interpretation. Need to provide more information and better direction for:
   - users at launch sites. Users need to know how to access the lake easily and legally, restrictions related to launching (e.g. boat inspections, parking fees, etc.), safety, and interpretive information about nearby cultural, historical, and natural resources.
   - paddlers while on the water. Users need to know where public access is allowed, what facilities are available, and interpretive information about nearby cultural, historical, and natural resources.

3. Restrooms. Paddlers need:
   - more restroom facilities along the shoreline; and
   - restrooms available throughout the year.

4. Public access. The preferred user experience is in small groups in uncongested areas. This results in pressures on existing areas and creates demand for:
   - more access to (or simply better information related to) public lands for launching, landing, and camping. Related to this concern is the need to protect private facilities from trespass, and protect natural resources from disturbance (see below).
   - more use of existing facilities during off-peak times to avoid crowded conditions.

Management/Operational Public land management agencies with lakefront property face changing management and operational challenges to accommodate and support non-motorized boat access.

5. Safety. Safety concerns for paddlers and other users include:
    - reducing power boat/paddle craft conflicts, specifically related to watercraft speeds, wakes, and collision potential;
    - the potential for inexperienced kayakers getting into dangerous situations, particularly in light of poor information available concerning weather patterns, waves, and distance to desirable destinations; and
    - kayakers and paddle boarders not using safety features such as life vests and lights.

6. Public/Private Interests. The interface between public and private interests generates conflicts related to:
    - public trespass on private beaches, piers and swim platforms, increasing concerns related to litter, security, and privacy;
    - maintaining existing legal public access, recognizing differences between the two states related to access; and
    - recognizing and enforcing regulatory requirements for all lake access uses equally, including non-motorized boat storage, launch, and landing activities.

Stewardship/Resources

7. Biological Conflicts. Non-motorized boat use presents potential conflict with certain natural resources including:
    - paddle craft proximity to sensitive wildlife sites such as osprey nests or waterfowl nesting sites;
    - trampling concern for shoreline vegetation, including Tahoe Yellow Cress; and
    - potential to spread invasive species.

II. MANAGEMENT AND FACILITIES ASSESSMENT

The Working Group considered input and collected relevant data for existing public access sites. Creating a framework to address issues and support non-motorized boating involved developing assessment criteria and applying them to the inventory data. This work recognized two basic ways of experiencing Lake Tahoe in a paddle craft: day trips and overnight trips.

A. Day Trip Assessment

The 2008 Lake Tahoe Non-Motorized Boat User Survey (User Survey) found the vast majority of current users launch their boats at a single location, paddle for a certain distance, and return to that same location.

Launching. At the most basic level, public paddle craft launching access to Lake Tahoe requires a parking spot close enough to the water's edge to provide reasonable access.[1] On site restrooms also provide a needed service for most day trips. These two basic criteria allow a simple assessment of the capacity for non-motorized launching. (This does NOT reflect the actual number of launches at any given site; no data exists to quantify number of launches.)

[1] Nearby parking is required for public launching of a kayak or paddle board. Public users can also rent a kayak from on-site concessionaires or store their boat in a seasonal storage area near the water. In these latter situations, users could access their boat in ways not requiring a parking space (i.e. take public transit to the beach). This is discussed in more detail in other sections of this Framework.

Figure 3 illustrates three different levels of development found at the public launching sites using the following criteria:

1. Most Developed Capacity - Adequate on-site parking (more than 10 spaces) within 200' of water, developed restrooms
2. Intermediate Developed Capacity - Drop off area within 200' of the beach, adequate parking on site within 100 yards, restrooms (may be portable)
3. Least Developed Capacity - No on-site parking, but legal parking within 100 yards of beach, no restrooms. (Also includes public access sites with available parking or drop-off location more than 200' from the water.)

Day Trips. The User Survey identifies the average day trip as out and back from a single location and average time on the water as 1 hour, 46 minutes (53 minutes each way). Using a range of travel speeds (2 mph - 6 mph), the typical day trip could extend 1.6 - 4.8 miles from each launching point. Therefore, it is possible to identify zones around each launching site that represent the area most likely to be used by slower and faster paddlers or watercraft. Mapping these zones, or routes, illustrates the areas of the lake best served with existing access and helps to identify the locations with a potential for high kayak or paddle board concentrations. **Figure 4c, Day Trip Inventory, All Users** illustrates day routes accessible for faster paddlers only (blue) and faster and slower paddlers (green) with adequate public launching access (shown on Figure 2 as highest and intermediate developed capacity).

B. Overnight Assessment

At Lake Tahoe, existing developed campgrounds near the lake in some areas support overnight non-motorized boat trips. Although the User Survey identified overnight users as a very small component of overall non-motorized use (5.2% of the total), these trips are sometimes high profile and the use is growing. Developed campgrounds near the lake lie within fairly easy paddle distance apart along the West and South shores. However, between Lake Forest and Zephyr Cove (along the north/east shore), nearly half of the total distance around the lake, camping prohibitions exist.

Considering both the attractiveness and the limitations of overnight camping trips at Lake Tahoe, the challenge of framework development involves assessment of the existing experience, and identification of how that experience can be enhanced and promoted to encourage high quality, legal, and safe use.

The User Survey shows most multi-day paddles did not involve circumnavigation of the lake. Most overnight trips were 1-3 nights, beginning and ending in the same location. Using slow-fast average paddle speeds and assuming a total of 2.5 hours of time on the water each day, this assessment can distinguish those portions of the lake with camping facilities accessible for slower and faster paddlers. Following this calculation[2]:

- slower paddlers require camping access not less than every 7.5 miles (paddling 3 mph for 2.5 hours)
- faster paddlers require access not less than every 10 miles (paddling 4 mph for 2.5 hours).

[2] Paddlers tend to follow the shoreline more closely for shorter paddles and to cut the bays during longer paddles. The distances calculated for this overnight analysis, therefore, assume routes cutting across large bays, not following the shoreline.

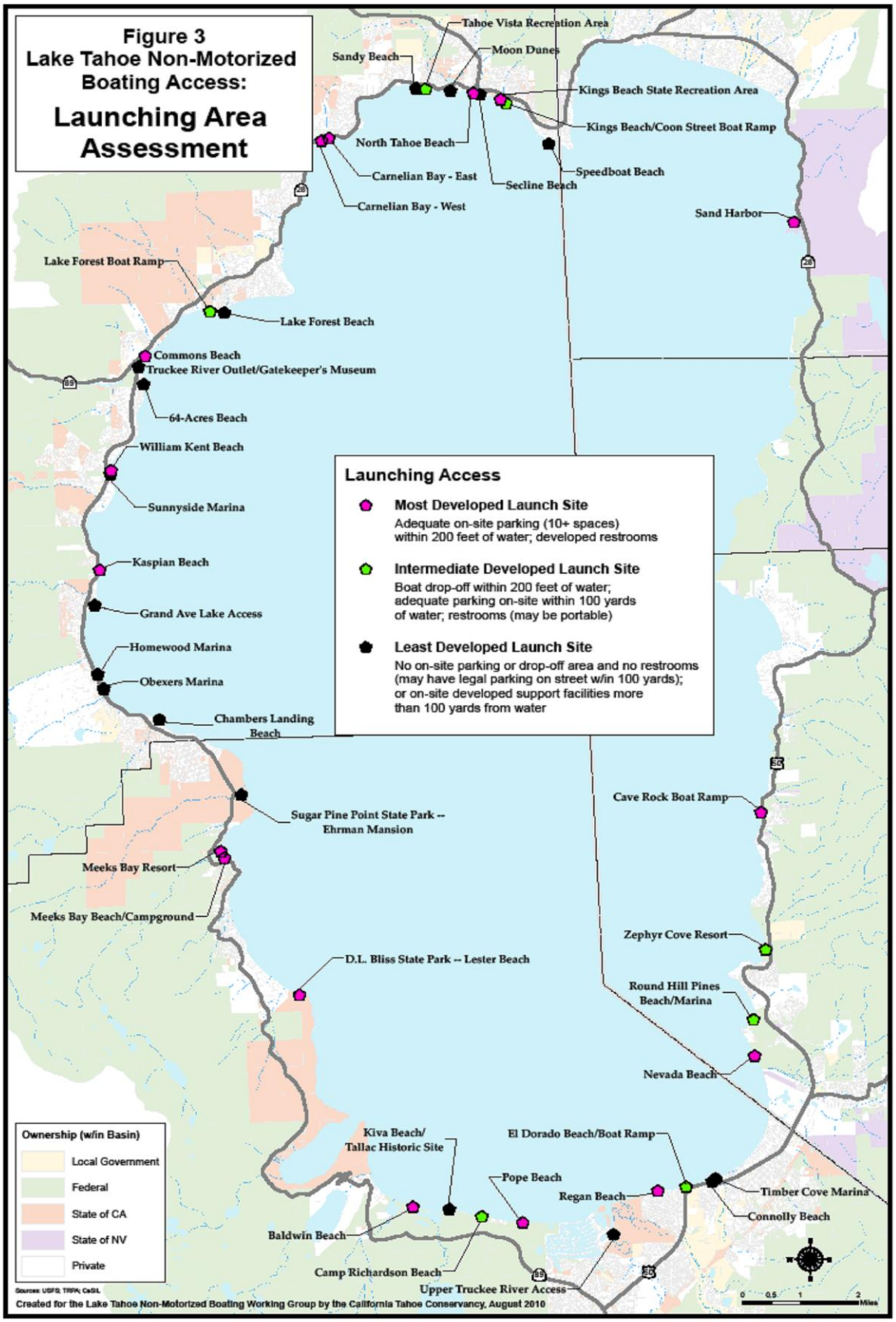
Figure 3
Lake Tahoe Non-Motorized Boating Access:
Launching Area Assessment
Tahoe Vista Recreation Area
Sandy Beach
Moon Dunes
Kings Beach State Recreation Area
Kings Beach/Coon Street Boat Ramp
North Tahoe Beach
Carnelian Bay - East
Carnelian Bay - West
Secline Beach
Speedboat Beach
Sand Harbor
Lake Forest Boat Ramp
Lake Forest Beach
Commons Beach
Truckee River Outlet/Gatekeeper's Museum
64-Acres Beach
William Kent Beach
Sunnyside Marina
Kaspian Beach
Grand Ave Lake Access
Homewood Marina
Obexers Marina
Chambers Landing Beach
Launching Access
Most Developed Launch Site
Adequate on-site parking (10+ spaces) within 200 feet of water; developed restrooms
Intermediate Developed Launch Site
Boat drop-off within 200 feet of water; adequate parking on-site within 100 yards of water; restrooms (may be portable)
Least Developed Launch Site
No on-site parking or drop-off area and no restrooms (may have legal parking on street w/in 100 yards); or on-site developed support facilities more than 100 yards from water
Cave Rock Boat Ramp
Sugar Pine Point State Park -- Ehrman Mansion
Meeks Bay Resort
Meeks Bay Beach/Campground
Zephyr Cove Resort
D.L. Bliss State Park -- Lester Beach
Round Hill Pines Beach/Marina
Nevada Beach
Ownership (w/in Basin)
Local Government
Federal
State of CA
State of NV
Private
Kiva Beach/ Tallac Historic Site
El Dorado Beach/Boat Ramp
Pope Beach
Regan Beach
Timber Cove Marina
Connolly Beach
Baldwin Beach
Camp Richardson Beach
Upper Truckee River Access
Sources: USFS, TRPA, CaSIL
Created for the Lake Tahoe Non-Motorized Boating Working Group by the California Tahoe Conservancy, August 2010
0 0.5 1 2 Miles

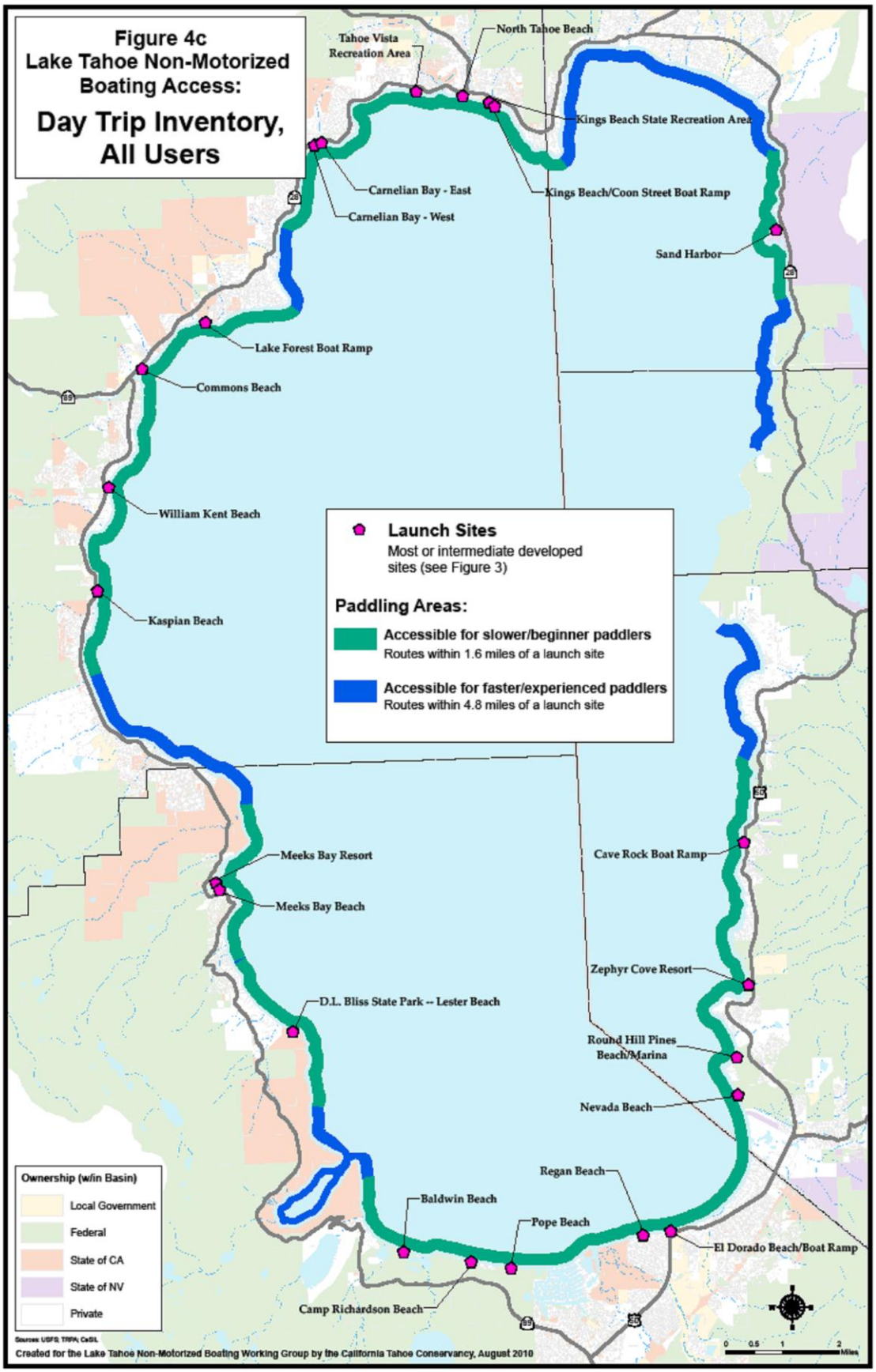
Figure 4c
Lake Tahoe Non-Motorized Boating Access:
Day Trip Inventory, All Users
Tahoe Vista Recreation Area
North Tahoe Beach
Kings Beach State Recreation Area
Carnelian Bay - East
Carnelian Bay - West
Kings Beach/Coon Street Boat Ramp
Sand Harbor
Lake Forest Boat Ramp
Commons Beach
William Kent Beach
Kaspian Beach
Launch Sites
Most or intermediate developed sites (see Figure 3)
Paddling Areas:
Accessible for slower/beginner paddlers
Routes within 1.6 miles of a launch site
Accessible for faster/experienced paddlers
Routes within 4.8 miles of a launch site
Meeks Bay Resort
Meeks Bay Beach
Cave Rock Boat Ramp
Zephyr Cove Resort
D.L. Bliss State Park -- Lester Beach
Round Hill Pines Beach/Marina
Nevada Beach
Regan Beach
Baldwin Beach
Pope Beach
El Dorado Beach/Boat Ramp
Camp Richardson Beach
Ownership (w/in Basin)
Local Government
Federal
State of CA
State of NV
Private
Sources: USFS, TRPA, CaSIL
Created for the Lake Tahoe Non-Motorized Boating Working Group by the California Tahoe Conservancy, August 2010
0 0.5 1 2 Miles

This assessment also evaluated potential for circumnavigation of Lake Tahoe. As identified previously, no legal camping opportunities exist between Lake Forest on the north shore and Zephyr Cove on the southeast shore. This nearly 32 mile stretch (measured by cutting the larger bays) exceeds a reasonable length for even the fastest paddlers in a single day. However, if the circumnavigation begins/ends at Sand Harbor, that distance is cut in half. An advanced kayaker can travel approximately 16 miles, paddling an average speed of 4 mph for 4 hours. This route presents more safety concerns - the longer time on the water increases the chance of encountering difficult wind/wave conditions and a portion of the distance offers no public support facilities such as restrooms - yet matches the abilities of skilled athletes.

Considering the assessment criteria and need to convey information easily to potential users, this framework adopts the terminology and color coding used by ski areas to define the recreation experience suitable for beginner, intermediate, and advanced users. The analysis calculates the distance between launching and camping opportunities and illustrates distances in three categories. **Figure 8a, Overnight Assessment - Camping**, presents the following information:

- Beginners - Easiest paddle distance between launching and camping opportunities (not more than 7.5 miles)
- Intermediate - Requires longer paddle distance between launching and camping opportunities (not more than 10 miles)
- Advanced - Requires strenuous paddling between launching and camping opportunities (up to 16 miles with route start at Sand Harbor)

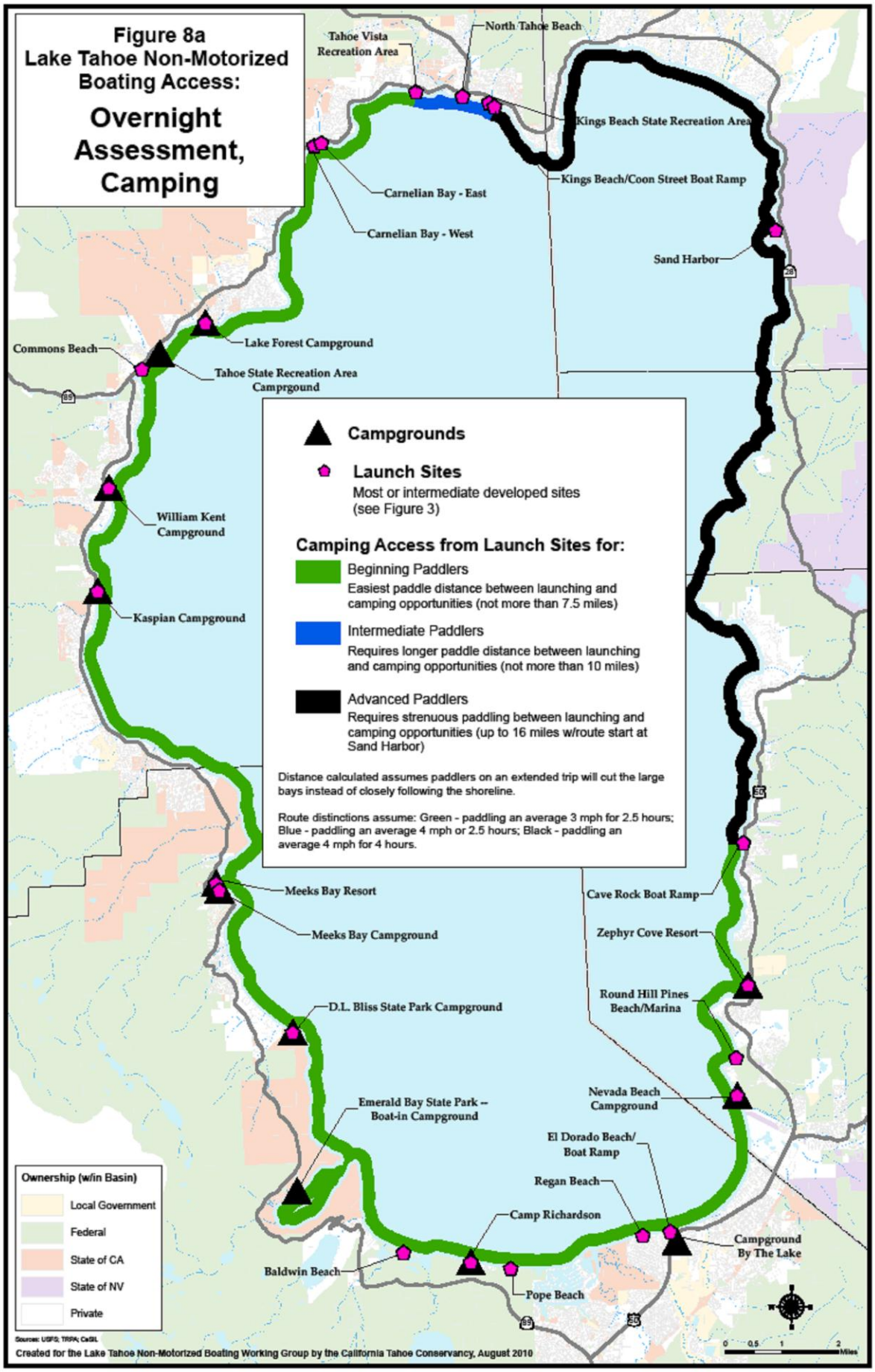
Figure 8a
Lake Tahoe Non-Motorized Boating Access:
Overnight Assessment, Camping
Tahoe Vista Recreation Area
North Tahoe Beach
Kings Beach State Recreation Area
Kings Beach/Coon Street Boat Ramp
Carnelian Bay - East
Carnelian Bay - West
Sand Harbor
Commons Beach
Lake Forest Campground
Tahoe State Recreation Area Camprgound
William Kent Campground
Kaspian Campground
Meeks Bay Resort
Meeks Bay Campground
D.L. Bliss State Park Campground
Emerald Bay State Park -- Boat-in Campground
Baldwin Beach
Pope Beach
Camp Richardson
Regan Beach
El Dorado Beach/ Boat Ramp
Nevada Beach Campground
Round Hill Pines Beach/Marina
Zephyr Cove Resort
Cave Rock Boat Ramp
Campground By The Lake
Campgrounds
Launch Sites
Most or intermediate developed sites (see Figure 3)
Camping Access from Launch Sites for:
Beginning Paddlers
Easiest paddle distance between launching and camping opportunities (not more than 7.5 miles)
Intermediate Paddlers
Requires longer paddle distance between launching and camping opportunities (not more than 10 miles)
Advanced Paddlers
Requires strenuous paddling between launching and camping opportunities (up to 16 miles w/route start at Sand Harbor)
Distance calculated assumes paddlers on an extended trip will cut the large bays instead of closely following the shoreline.
Route distinctions assume: Green - paddling an average 3 mph for 2.5 hours; Blue - paddling an average 4 mph or 2.5 hours; Black - paddling an average 4 mph for 4 hours.
Ownership (w/in Basin)
Local Government
Federal
State of CA
State of NV
Private
Sources: USFS; TRPA; CaSIL
Created for the Lake Tahoe Non-Motorized Boating Working Group by the California Tahoe Conservancy, August 2010
0 0.5 1 2 Miles

III. FRAMEWORK ELEMENTS

The Non-Motorized Boat Working Group considered the purpose of the study effort, data collected and assessed, and input from users and other interest groups. The resulting discussions identified specific ideas that address the issues studied throughout the collaborative process. If implemented, these actions will improve accessibility and enhance the experience for non-motorized boaters and reduce concerns and conflicts associated with this use.

This framework presents the collective concepts and ideas of the Working Group participants, but does not establish requirements or standards for promoting non-motorized boating. Public shoreline land manager agencies, as well as private parties, should consider framework elements as tools available to incorporate into planning and decision making processes. Additionally, this framework is not definitive in its scope. Other enhancements or support opportunities could arise not envisioned in this process and should be pursued if possible.

The following table presents general objectives and concrete actions to address seven major issue areas related to facilities, management and operational needs, and education/outreach strategies.

Framework Element Discussion

1. Facilities/Amenities

The framework elements recognize facility needs generated by non-motorized boat users. The elements also recognize those needs exist within the context of existing user groups and environmental sensitivity of lakefront areas

Parking. Lake access parking is in very limited supply during peak use periods and serves a wide diversity of recreational needs. Creating additional parking near Lake Tahoe, however, runs contrary to the environmental values and standards of the Region. Therefore, framework elements related to launching focus on reconfiguring existing parking lots to allow easier launching, directing launching to off peak times to reduce parking competition, and increased use of boat wheels, shuttles, on-site storage, and other strategies to allow lake access without nearby parking.

Wayfinding. Input from all interest groups and the User Survey identified confusion and conflicts resulting from a poor awareness of access issues. All the framework elements related to wayfinding address the need for paddlers to know where to access the lake, where to access needed and desirable destinations, what the rules and regulations are for any given public beach area, and how to access this outdoor recreation experience safely and enjoyably. A primary purpose of these elements is to direct users to those lakefront facilities best suited to meet their needs,

Other. Other facilities and amenities needed by paddlers include expanded access to restrooms, both additional opportunities at landing sites and restrooms available throughout the year.

2. Public Access

Framework elements recognize non-motorized boating as part of the existing mix of boating uses at Lake Tahoe and its unique opportunities and needs. The framework also recognizes the

challenges that accompany accommodating different user types and different ownership patterns, and the limitations for increasing access capacity.

Day Use. Framework elements to support high-quality day use paddling including increasing the number of ways to access the lake without increasing shoreline parking. This includes use of on-site boat storage, increased use of boat rental opportunities, off peak launching use to reduce parking competition, and use of shuttles. Improving information to paddlers is another critical element in supporting better access. This information will direct users to the launch and landing sites that offer facilities most suited to their need and that reduce conflicts with other users, private property owners, and sensitive environmental resources.

Overnight Use. Framework elements directly address the issues identified by encouraging and improving legal access to existing developed campgrounds for short multi-day trips. The framework identified circumnavigation as an activity suited to skilled athletes and includes recommendations for better outreach related to the challenges and restrictions associated with this use.

3. Safety

Framework recommendations focus on education as a means to improve paddler safety. Much of the safety responsibility lies with non-motorized boat users, although increased awareness between all boat users is necessary to support safe boating at Lake Tahoe.

4. Public/Private Coordination

The study process highlighted the need for framework elements related to protecting both public recreation access and private property rights. Recommendations that will reduce conflicts include better accommodating paddlers at public sites for launching and landing, and better educating paddlers concerning access rights and responsibilities. A key feature of these recommendations includes fostering ongoing specific dialogue between paddlers and property owners to generate a shared Code of Respect that can reduce conflicts and improve the use experience.

5. Resource Stewardship

The Framework builds on the stewardship values of most paddlers, focusing future effort on creating the educational message and outreach strategy that can reduce impacts on sensitive biological resources. Key to this outreach will be implementing the emerging strategy for aquatic invasive species watercraft inspection and decontamination, coordination with Regional plans for raptor and waterfowl nesting sites protection and protection of Tahoe Yellow Cress populations.

NON-MOTORIZED BOATING FRAMEWORK ELEMENTS: TOOLKIT FOR SUPPORT				
		Capital Improvements	**Management/ Operational**	**Education / Outreach**
Facilities / Amenities *The study and outreach process identified improvements to public facilities desirable to support non-motorized boating.*	*Parking*	1. Redesign existing parking lots for improved drop-off locations. 2. Encourage on-site seasonal kayak storage where permissible to reduce parking needs.	1. Establish early hours programs to encourage use during off-peak, calmer wind periods. 2. Support development of shuttle services (through promotions, fee structures, or other means).	1. Promote off peak use.
	Wayfinding	1. Upgrade public access signs at beach entrances to reflect launching opportunity. 2. Develop coordinated wayfinding program and install markers visible from the water to identify public sites. May include signs, buoys, or other features to identify waypoints. Coordinate lake-side and land-side markers with the developing Regional wayfinding program.	1. Add information to all agency websites concerning suitable facilities and route segments. Include info important to paddlers related to site amenities as well as general site restrictions (time of use, dog policies, fees, etc.) 2. Develop downloadable list of GPS coordinates for facilities/amenities.	1. Develop coordinated promotional/ educational message about facilities and route segments. 2. Develop route-specific interpretive information for use at launch sites, on outreach material, and on the web to enhance the user experience.
	Other	1. Where possible, provide permanent or portable restrooms accessible from the water.	1. Develop partnerships with lakeside businesses to allow public use of restrooms.	1. Promote those locations where restrooms are already available year-round.

		Capital Improvements	Management/ Operational	Education / Outreach
Public Access *The framework process identified key elements to improve public access and resolve conflicts related to public access.*	*Day Use*	1. Increase quality and number of existing public sites usable as launch sites by improving parking, supporting shuttle services, or providing boat wheels. 2. Encourage rental opportunities on appropriate sites. 3. Encourage seasonal boat storage on sites that conform to TRPA Code provisions and public land manager requirements to improve access while reducing parking needs. 4. Provide low docks at launch sites with current ADA accessibility to meet needs of users with disabilities. Where possible, improve overall site accessibility. 5. Pursue opportunities to secure additional public day use access sites where possible.	1. Better utilize existing sites by encouraging use of less crowded launch sites and off peak use (see other categories)	1. Promote day use of launch facilities with adequate capacity.
	Overnight Use	1. Improve access to existing camping opportunities (e.g. providing boat locks near the water, boat wheels, etc). 2. Provide facilities for ADA accessibility at campgrounds with paddler access where possible. 3. Pursue opportunities to secure additional public camping sites where possible.	1. Encourage overnight trips using existing camping opportunities that do not circumnavigate the lake through campground management strategies.	1. Make overnight trip rating system part of outreach message to promote use of legal camping. 2. Develop partnership with LTWT Committee to support awareness of overnight lodging opportunities to reduce illegal camping.

	Capital Improvements	Management/ Operational	Education / Outreach
Safety *Framework participants identified many specific features that will improve non-motorized boating safety, as well as safety for other lake users.*	1. Develop coordinated signage identified by the safety program for use at non-motorized launch sites.	1. Develop coordinated safety program about regulatory requirements at launch sites that recognizes non-motorized launches as boat launches. Program to address: overall paddling safety (including safety classes for self rescue and t-rescue techniques), specific Tahoe weather/water conditions, safety related user conflicts, wayfinding and route information.	1. Incorporate elements of safety program in all outreach media. 2. Work with paddlers and motor boat users to develop appropriate safety messages for both user groups to improve safety for each. 3. Encourage paddlers to take responsibility for safety through measures such as: improving boat visibility, paddling in the no-wake zone, paddling in groups in open water areas. 4. Increase motor boat user awareness and compliance with the no-wake zone.
Public/Private Coordination *The framework process incorporated proposals from public and private interests that can improve the quality of the experience for all user groups.*	1. Develop and implement signage program so paddlers know where public lands are. 2. Implement improvements to public facilities noted to attract users away from private beaches. 3. Increase information at launch sites concerning land ownership in the nearby route segments, highlighting the location of public landing opportunities.	1. Develop program to educate paddlers concerning trespass. Program to include: access from the land (prohibit trespass over private property to access the lake), access from the water (different access allowances/ restrictions in different states), prevent access on private facilities such as buoys, swim platforms and piers, and safe harbor rights and limitations.	1. Work with paddlers and landowners to develop Code of Respect to recognize legitimate needs of each group. 2. Develop education message to direct paddlers to public facilities. Include GPS points in outreach materials to improve wayfinding. 3. Education message to specifically identify limits of private property, and public trust easement differences in California and Nevada..

	Capital Improvements	Management/ Operational	Education / Outreach
Resource Stewardship *The framework process identified opportunities to develop and reinforce stewardship values relative to sensitive resources.*	1. Monitor TYC protection fencing on landing sites for adequate signage/maintenance. 2. Direct paddle craft landing away from new sites with signage or fencing as TYC populations move.	1. Support AIS control program developed by others at all public launch sites. 2. Work with wildlife scientists and fisheries biologists to develop/ implement wildlife protection measures (avoid approach during sensitive times, maintain minimum distance, etc.) 3. Incorporate public paddle access areas into monitoring/ surveying protocols for sensitive species to identify emerging conflicts if they occur.	1. Support AIS control program through websites, launch site info, etc. 2. Develop/promote interpretive message specific to paddlers related to sensitive species. 3. Promote paddler-specific Leave No Trace elements in all outreach material.